

med
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THE DUBLIN JOURNAL

Biological & Medical Science
STORAGE

MEDICAL SCIENCE. *Index*

CONTAINING

Biological & Medical
ORIGINAL COMMUNICATIONS

REVIEWS, ABSTRACTS, AND REPORTS.

IN

Medicine, Surgery, and Collateral Sciences.

EDITED BY

Sir JOHN MOORE, M.A., M.D., D.P.H., Dubl.; D.Sc., Oxon.; F.R.C.P.I.

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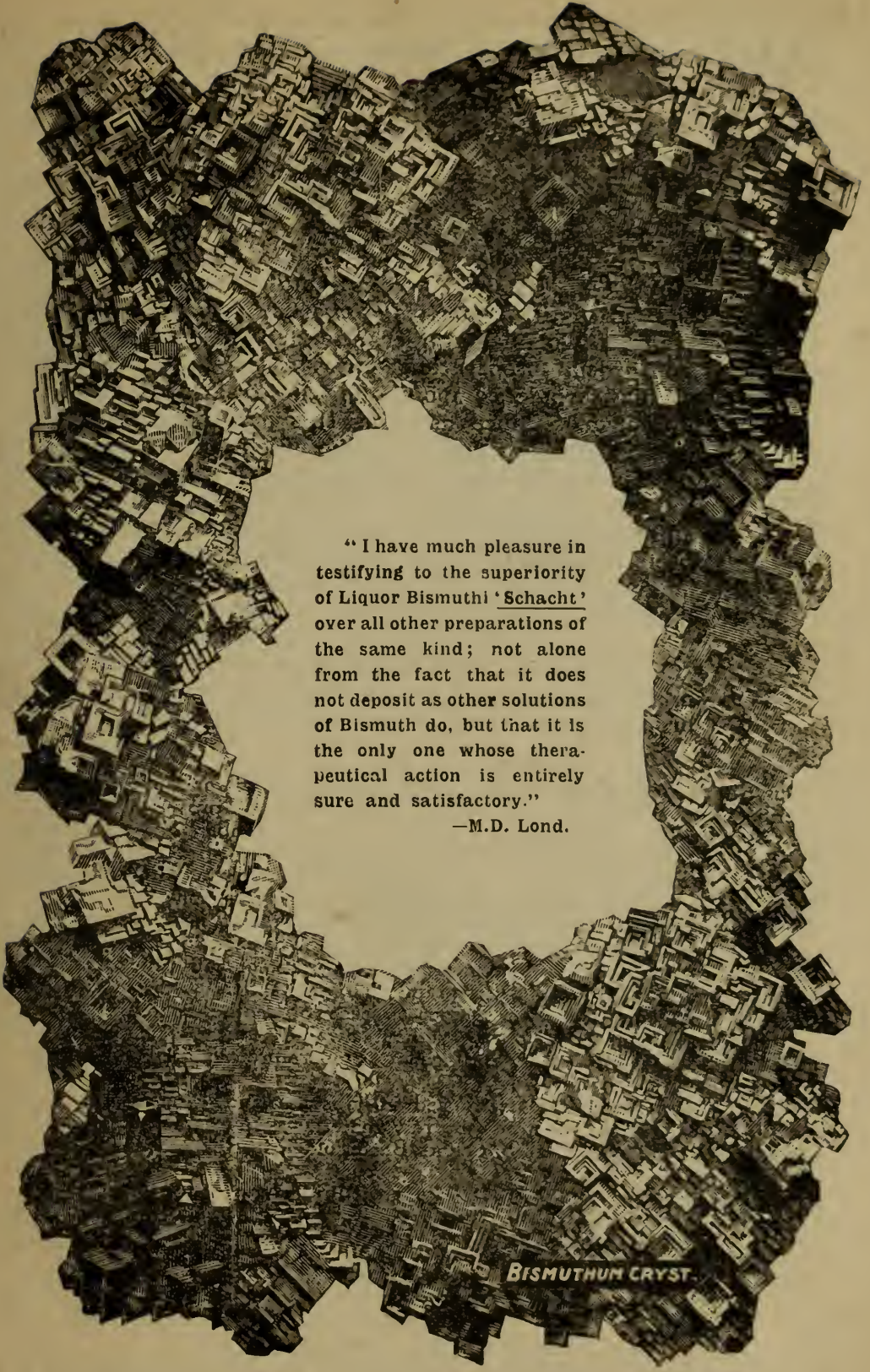
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2. Materia Medica and Therapeutics. By J. Mitchell Bruce, M.A., LL.D. (Hon.) Aberd., M.D. Lond., F.R.C.P., and Walter J. Dilling, M.B., Ch.B., Aberd., Captain R.A.M.C. (Temp.), &c. Eleventh Edition, revised to correspond with the War Amendments of July, 1917, and March, 1918. London: Cassell & Co., Ltd. 1918. Cr. 8vo. Pp. xv + 675.

3. Svenska Läkaresällskapets För-

handlingar. År 1918. Häfte 10. Oktober 31.

4. Kala-azar: its diagnosis and treatment. By Ernest Muir, M.D., F.R.C.S. (Edin.), Mission Hospital, Kalna. Calcutta: Butterworth & Co. (India), Ltd. 1918. Pp. 37.

5. The "Wellcome" Photographic Exposure Record and Diary, 1919. London: Burroughs, Wellcome & Co.

6. The Clinical Value of Minimum Blood-pressure Records. By Leslie Thorne Thorne, M.D., B.S., &c. Reprint. November, 1918. Pp. 8.

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THE DUBLIN JOURNAL OF MEDICAL SCIENCE.

DECEMBER 2, 1918.

PART I. ORIGINAL COMMUNICATIONS.

ART. X.—*Influenza*.^a By GEORGE PEACOCKE, M.D.,
F.R.C.P.I.

MY first and very pleasant duty at this our opening meeting for the present Session, is to thank you for the honour you have conferred on me by electing me as your President for the coming year. I am deeply sensible of the honour, and trust that during my term of office I shall preserve the worthy traditions handed down to me by my predecessors in the Chair.

In the work of the Academy I have taken a great interest since I was elected a Fellow, nearly 25 years ago, and on the Council of this Section I have served without a break for the past 16 years. During that time, but especially of late years, I have noticed a growing decline in the interest taken by the Fellows in the Sectional meetings. Our late President, Dr. Drury, discussed this subject very fully in his Inaugural Address last year. It is, therefore, unnecessary for me to say more on the matter. I fully endorse all that he said on that occasion.

^a Presidential Address delivered at the opening meeting of the Section of Medicine in the Royal Academy of Medicine in Ireland, on Friday, November 15, 1918. [For the discussion on this paper see page 284.]

During the present Session it has been decided on the recommendation of the General Council to hold fewer Sectional meetings. In the Medical Section, there will be only four meetings instead of six, our usual number. I hope the meetings will be well attended, that our Secretary will not find it difficult to obtain sufficient and suitable material for them, and that the discussions will be helpful and illuminating.

We are met to discuss the nature and symptoms of the great pandemic which during the past few weeks has swept over the entire world, and exacted a heavy toll of sickness and death. It is, I think, generally held that the causal organism of the disease is the *Bacillus influenzae*, but many consider that some, as yet undiscovered, virus is responsible for the present epidemic.

When uncomplicated, influenza is not a malady that often causes death. The high mortality of the present epidemic is due almost entirely to the frequency with which cases have become secondarily infected with pneumococci and streptococci—a striking feature of the present visitation.

The public have been unduly alarmed by the writings in the press, and something akin to a panic has resulted. The death-rate, no doubt, is a high one, but if the case mortality could be estimated, it would not be found to be of very formidable dimensions.

The figures for a large hospital with which I am connected, and to which the milder cases are not admitted, are, for the month of October, 497 admissions, with 32 deaths, a percentage of 6.5. In my own private practice the rate is lower—a generous estimate would not amount to a death-rate of 2 per cent.

The symptoms presented by the disease are many and various. In the severe cases, especially those complicated by pulmonary affections, I have noticed the great frequency with which cyanosis occurs—the lividity appearing early, and persisting, often for many days, until, as is usual in these cases, a fatal termination ensues.

Laryngitis is extremely common, giving rise to considerable pain over the larynx, a distressing brassy cough and hoarseness, amounting in many cases to complete loss of voice.

Delirium, either of a low muttering type or more violent in character, is met with in many cases, and often persists for some days after the temperature has become normal. Mania, following the pyrexial period, and lasting for ten days, I have seen in one case.

The temperature chart is in many cases a fallacious guide. Some of the most severe cases I have seen have had only a moderate degree of pyrexia. A sign full of omen is a fall of temperature without any corresponding fall in the pulse and respiratory rates.

The condition of the tongue I regard as a helpful sign in prognosis. When moist, and not more than lightly furred, the case is, as a rule, progressing favourably; when thickly coated, and especially when dry, the chances of recovery are small.

Vomiting has been a distressing and sometimes alarming symptom in many cases.

Albuminuria to a slight degree is common in the acute stage; when abundant, the outlook is not favourable. Symptoms of a definite acute nephritis I have not observed. In one case, which terminated fatally, the urine contained a large amount of blood. Examination showed it was not hæmaturia, but hæmoglobinuria.

The pulmonary signs are extremely varied. Bronchitis or broncho-pneumonia is present in a large proportion of cases. Typical physical signs of a true fibrinous pneumonia are rare, even when, as is frequently the case, the sputum is rusty, and the general symptoms are those associated with the disease.

In the early stages a pulse of 80 with a temperature of 102° to 103° is not uncommon, and in favourable cases this comparatively slow pulse-rate may continue throughout the illness. A daily increasing pulse-rate is a most unfavourable sign.

During convalescence the pulse-rate becomes extremely slow. I have on more than one occasion found the rate to be only 40 per minute.

Jaundice I have seen in a few cases : it has been present in both fatal and non-fatal cases. The tendency to hæmorrhages has been noted by all observers as a common complication. Epistaxis is the most frequent form, and occurs in severe and mild cases alike. Of more serious import is bleeding from the mouth and gums. One case of cerebral hæmorrhage has occurred in my practice, in a young man, producing complete left-sided hæmiplegia. He is now recovering. Otitis media occurs with sufficient frequency to merit recognition. It differs in no way from the affection, as it occurs in many of the infectious fevers.

Tonsillitis is not common—quinsy I have seen in a few cases.

Unilateral parotitis I saw in one man. The condition arose only a few days before death, and was associated with an acutely septic condition of the mouth.

I have not observed any case of influenzal meningitis; possibly in some of the acute cases with marked delirium I have overlooked its presence.

I have not attempted to classify the varying types of this protean disease, but there is one outstanding form which, with the dramatic suddenness that death ensues, deserves special mention. A patient, suffering at the time from a typical severe attack, suddenly becomes alarmingly ill. Pain, often acute, is felt in the chest, the respirations become rapid, and breathing greatly embarrassed; a frothy bloody fluid is coughed up; delirium, rapidly passing into coma, ensues, and death may occur in a few hours after the onset of these acute symptoms. I have seen several such cases, but will refer to only one. A young woman, 24 years of age, otherwise healthy, complained on a Wednesday night of feeling sick. Her temperature was slightly elevated. The next morning she was not so well, and fainted on getting out of bed. During the day her condition grew worse; she was re-

moved to hospital, and when I saw her, at 7 p.m. on Thursday evening, she was dying. Râles were audible all over her chest; she was unconscious; her pulse was imperceptible, and she was coughing up fluid of the kind I have just described. She died at 10 p.m. the same evening.

As regards treatment, I have only to say I know of no specific. Salicylate of quinine is the drug I most employ as a routine. Aspirin appears to relieve the headache.

To keep the bowels free and to promote sleep are, I am sure, objects of great importance. Calomel I prefer as a purgative; trional or some preparation of opium for sleeplessness. Stimulants are required in most cases, and in some should be given freely.

The influenzal vaccine prepared in the laboratory of Trinity College I have used in some cases, but I cannot say I have noticed any particular effect from its use. Its value as a prophylactic is a burning question at the present time. The subject will be brought before you in the paper which is to follow, and I trust there will be a full and free discussion.

ART. XI.—*Influenza*.^a By JOHN SPEARES, Captain, R.A.M.C.; Assistant Physician to the Adelaide Hospital.

LOCAL outbreaks of influenza occurring during the past two years should have warned us of the approach of the present pandemic. One of the ablest workers at cerebro-spinal meningitis has stated that when the percentage of carriers of the meningococcus passes a certain point we have an epidemic of this disease. Perhaps this is applicable to influenza. It is 28 years since the last severe epidemic, and the intervening years have been punctuated with sporadic outbreaks, which may have caused an increase in the number of carriers. The course followed by the disease seems to have been from west to east and not east to west, as formerly.

^a Read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, November 15, 1918. [For the discussion on this paper see page 284.]

ÆTIOLOGY, ETC.

Influenza is extremely contagious, possibly the most contagious of all infections, and seems to attack the strong and the weak; old age alone seems to confer some degree of safety. Coughing, sneezing, &c., are the main spreading factors. Many workers are now agreed that the causative agent of this present pandemic is a bacillus similar to that described by Pfeiffer in 1892. The reasons mainly are:—(1) The remarkable prevalence of this bacillus in the sputa of sufferers as compared to healthy people; (2) the recovery of the bacillus from the blood, pleural effusions, &c., of cases clinically influenza.

While this is not a definitely established fact, yet the evidence in favour of the bacillus is on the increase. In the Howth epidemic, the bacillus was isolated from five cases of the first seven examined, and since then the examination of over 150 sputa showed bacilli present morphologically, indistinguishable from Pfeiffer's, and in all probability genuine influenza organisms. Several unsuccessful attempts to recover organisms from the blood have been made.

Incubation.—The incubation period is about two days. This has been noted by many observers, and the onset has been in many cases remarkably sudden.

Types and Features.—A pure influenza attack may be followed by a secondary pneumonia, which was not caused by the influenza bacillus in the cases examined, but by a streptococcus or pneumococcus, and occasionally other organisms.

Influenza is protean in its manifestations, and has been mainly of the respiratory type, with occasional instances of gastro-intestinal, nervous, and other cases.

The striking features in many of the respiratory cases have been the presence of epistaxis and a tendency to hæmorrhages of various kinds, toxæmia, grossly irregular

temperature, cyanosis, early excessive watery nasal discharge, albuminuria, &c.

POST-MORTEM EXAMINATIONS.

Autopsies were made in seven cases, with the following results :—

Macroscopic.—Lungs.—Two of the cases had a definite recent extensive fibrinous pleural exudate on section.

Some cases showed extensive broncho-pneumonia simulating lobar; others showed definite areas of consolidation, nodular and peribronchial, especially in the right lower lobe, with a definite tendency to coalesce. Grey patches around the bronchioles, and intervening red areas were seen. On squeezing, purulent material exuded from the bronchioles, especially in the solid areas. The bronchial mucous membrane was hyperæmic, and coated with a mucopurulent exudate.

Spleens showed a congestion and friability in three of the cases.

Three *kidneys* showed acute nephritis; capsules peeled easily, cortices had a somewhat boiled appearance.

Hearts showed a flabby condition; three were dilated: Two cases showed patches of pericarditis of outer surface from contact with pleura of lung.

Livers, as a rule, were congested, and two showed a “nutmeg” appearance on section.

Microscopic.—Lungs.—The alveoli contained R.B.C., polymorphos; desquamated, endothelial cells, which were round and swollen, also a serous exudate. Several of the cases showed hæmorrhagic areas. The alveolar walls were greatly congested and œdematous, the endothelial cells were swollen, and frequently projected into the alveolus; in many fields it was difficult to make out the alveolar wall.

Bronchi.—These showed a purulent exudate, desquamation, and hyperæmia.

Three *kidneys* showed acute nephritis, mainly of tubular type. The cells lining the tubules were swollen, and the

lumen contained albuminous material, and in three cases R.B.C. Congestion around the tubules was very marked, and was present to some degree in the glomeruli.

Liver.—Hæmorrhages were observed close to the surface, and there was marked general congestion.

In six cases streptococci were grown from lung cultures, also pneumococci in five cases, and in two cases a hæmatolysing staphylococcus. One of the lung sections stained by Gram showed a most extraordinary number of streptococci.

IMMUNITY.

We have been taught that one attack of influenza does not confer any immunity, and that, on the contrary, many people suffer almost yearly from "flu" attacks. However, it is a remarkable fact that in Dublin, and in several of the country districts, it has been observed that those people who had a severe attack of influenza last July are not being attacked now. There are exceptions to this it is true, but the fact remains that numbers of people seem to have acquired some degree of immunity, assuredly conferred on them by their July attack—possibly this immunity is of a transient nature, but at any rate it has lasted three months.

The periodicity of epidemics also tends to show that there is some degree of general immunity, which gets diluted in time by a new population of relatively low immunity. It must also be remembered that many attacks of catarrh are incorrectly termed influenza.

PROPHYLAXIS.

On the supposition that the July epidemic conferred some degree of immunity, and as prophylactic vaccines against catarrh have met with considerable success, it seems reasonable to suppose that a vaccine made of *B. influenza* should confer some degree of immunity if given in suitable doses. An attempt has been made to provide prophylactic treatment, which began on

October 7th. The reports received up to the present have been very favourable, and in many cases striking, but it is impossible to say definitely if the vaccine is protective or if it reduces the severity of the attack in inoculated people. However, the evidence tends to show that some degree of immunity is acquired after two or more inoculations. The doses given have been : first dose, 25 millions; second dose, 40 millions, approximately.

It is fully determined that no unfavourable effects have followed the doses. A certain number of cases have contracted influenza within 36 hours after their first dose, and it is advisable that all who are inoculated should be warned not to expose themselves to infection for 24 hours at least.

Mixed vaccines of streptococcus, pneumococcus, &c., have been tried, but not on so extensive a scale in Ireland, as it seems more logical to try to prevent the primary influenzal attack, and it is difficult to regulate dosage and gauge resulting immunity when using a mixed vaccine. Rigid isolation has proved a most efficient prophylactic agent.

TREATMENT.

Calomel, oxygen, stimulants, salicylates, strychnine, &c., are, of course, widely used and known to everyone.

Vaccine treatment (*B. influenzae*) may be tried in early cases. Many observers are fully satisfied that the results are good. The doses should be small—10 to 15 millions first dose. Further experimental evidence is necessary, as credit may be wrongly given to a vaccine based on the fallacious argument *post hoc, propter hoc*.

When pneumonia has set in pure influenza vaccine is certainly not indicated. The offending organism in the main is a streptococcus, and occasionally the pneumococcus. A mixed vaccine may be used, but there is not yet sufficient evidence to show that it is of any value. Serum treatment, especially for pneumococcal pneumonia, has been tried, with apparent success, in America, but not to any

extent in Ireland. The serum of convalescents seems to be an efficient therapeutic agent, and this is an additional argument in favour of vaccine prophylaxis. Anti-streptococcal serum seems certainly to be indicated.

CONCLUSIONS.

1. That the mass of evidence is that the present pandemic is caused by a bacillus which morphologically and culturally resembles Pfeiffer's.

2. That the fatal secondary pneumonia is caused mainly by a streptococcus hæmatolyticus, which is frequently associated with hæmorrhagic tendencies.

3. That there is conclusive evidence of acute nephritis and albuminuria in severe cases.

4. That probably a certain degree of immunity is conferred by prophylactic use of influenza vaccine, and that the use of the vaccine for this purpose is justifiable.

5. That further experiments, duly controlled, are necessary to establish the utility of influenza vaccine for prophylaxis and early treatment.

I am greatly indebted to the President for the opportunity he has given me to explain what work we have done up to the present; of course, it is premature yet to give detailed statistics.

TREATMENT OF HEMOPHILIA WITH EMETIN.

MONRO records (*The Practitioner*, September, 1918) the remarkable result of using emetin in checking the bleeding on one occasion in a case cited. Monro gave one-half grain of emetin hydrochlorid by hypodermic injection in the forearm. The next morning the patient was in a profuse perspiration; he complained of pains in his joints, and his arm was swollen. The urine was scanty and still bloody; the temperature had fallen to 100. The day following his temperature was normal, the joints were better, and he passed normally coloured urine—the first for exactly ten weeks. From that time on the patient made a steady recovery.—*Journal of the American Medical Association*, October 26, 1918.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES

Surgical Therapeutics and Operative Technique. By E. DOYEN. English edition prepared by the author in collaboration with H. SPENCER-BROWNE, M.B. Cantab.; Eleve de l'Institut-Pasteur; Médecin et Chef de Clinique de l'Institut Doyen. London: Baillière, Tindall & Cox. 1917. Volume I. Pp. ix + 746. Volume II. Pp. viii + 680. 1,038 illustrations. To be completed in three volumes.

THIS English edition is taken from the French edition which comprises five volumes. It is at the request of Professor Doyen that this English edition is being prepared.

This is not a translation of the existing French edition, but is taken from the material from which the second French edition will be completed, and it contains the latest developments in war surgery and surgical treatment in general.

The first volume before us opens with an introduction of some 34 pages on the State of Surgical Practice at the beginning of the Twentieth Century; Surgical Techniques and the Duties and Rights of the Surgeon—an introduction well worthy of perusal.

The operative part of Volume I. is divided into two parts: General Surgical Technique and Regional Surgery, which is devoted entirely to the Surgery of the Head and Face, in which are included departments of surgery which we, in this country, are more accustomed to leave to the specialists—viz., ophthalmic operative surgery and the surgery of the nose and the sinuses in connection therewith.

The work is most profusely illustrated throughout, and

the work of translation is most carefully performed, with every endeavour, and indeed with complete success, to express the author's originality of thought and phrase.

Anyone acquainted with Professor Doyen's work as a surgeon knows his inventive genius in the nature of instruments and appliances. These are all most abundantly illustrated in the sections upon general surgical technique.

The work, when completed, is one for which we prophesy a great success. It is certain to find a place in the study of every English speaking, modern surgeon, and the surgical profession owes a deep debt of gratitude to the author and translator for placing the work in the hands of their confrères.

THE second volume is devoted to operations upon the head, the neck, thorax, shoulder and upper limb, the sacrum, ilium and lower limb, and opens with a description of the operations upon the organs of mastication and deglutition. We are surprised to find on the first page that facial furuncle is given the alternative name of anthrax. In the light of modern bacteriological knowledge such a statement seems to us somewhat loose. Under this section too we have some doubts as to whether, when undoubted infectious enemies have spread to the cavernous sinus, restoration and recovery will follow one or two injections of antistaphylococcus vaccine.

Hare-lip and its operative treatment is very well described, as indeed are all the operative procedures upon the lips and face. The plastic operative work is all most excellently illustrated and leaves nothing to be desired.

Under the head of Congenital Fissure of the Velum Palati we find the following statement:—"The process of reparation of congenital fistula is not satisfactorily effected till after the age of seven or eight years. At an earlier date we merely expose ourselves to failure on account of the greater thinness of the flaps and the unmanagableness of the child. The voice retains its nasal quality for a certain period after the operation."

This teaching is scarcely in accord with that of British surgeons.

The section dealing with operations upon the tongue for malignant disease is not up to the standard to which we in this country are accustomed.

The methods of dealing with the thyroid glands (especially the methods of partial thyroidectomy as practised by the author) do not commend themselves to us.

The specialist's department follows, viz.: operations upon the larynx and trachea.

Under the heading of Malignant Tumours, their treatment by anti-neoplastic vaccination and local treatment with bipolar voltaisation and electro-coagulation is described, but, we may say at once, we have no great faith in the efficacy of such treatment.

Under the heading of Ligature of Arteries in the Neck we find a very short description of the operation of ligature of the innominate artery, which is completed in about seven lines. The last line reads:—"Fifth Stage—Reunion (referring to skin) and drainage. . . ." This is not quite satisfactory, and we certainly would avoid drainage, which we think tends to court disaster in this operation.

Treatment of Aneurysm by incomplete ligature of an artery applied proximally is advocated in cases of aneurysms of the neck. This procedure is subsequently followed or not by partial extirpation of the sac, and reconstitution of the arterial segment—arterial grafting—is recommended. This seems to be a modification of the method of Matas.

The author tells us he tried to replace the missing jugular vein by the jugular vein of a sheep in 1909. The venous segment transplanted was that taken from the neck of a sheep and measured 20 centimetres in length. The operation is described as a complete success.

In the treatment of cancer of the breast will be found some remarks under the heading "General Considerations on the Treatment of Tumours of the Breast." A few extracts will indicate the author's views.

"The tendency with most surgeons is to adopt early

and very extensive operation. . . .” “The surgeons who have deceived themselves regarding the value of these extensive operations have been recalled to reality by the observation of rapid and inoperable recurrences.”

“The fact is certain that many extensive operations also hasten the death of the patient by provoking adipose inoculation of the cancer over the wound of operation to a great distance from the seat of the primary tumours.”

“But submit the patient, on the contrary, at the outset of cancer of the breast to anti-neoplastic vaccination, and the tumour will nearly always be found to diminish in volume during the first weeks of the treatment.” “In a certain number of cases in the male, as well as in the female, these tumours may become wholly reabsorbed.” “It has even happened to me in presenting a number of cases, in which the patients had undergone neoplastic vaccination, that I was unable to show on which side the tumour had been.”

“Two varieties may be met with. If the tumour is very limited. I practise ablation at 10 to 15 millimetres from its limits, and leave the breast behind.” “I do not open the axilla if I discover no enlarged glands.” “The limited operations, which I call parsimonious, have given me remarkable results. . . .” “But when the tumour is voluminous and very widely extended, we must not calculate on the efficacy of the vaccine.” “The best procedure for prevention of dissemination of cancer cells in the organism is that of thermic electro-coagulation.”

Needless to add, we do not subscribe to these doctrines, nor can we commend this section of the author's work.

The description of operations upon the thorax is quite good, and most copiously illustrated. In connection with the operative surgery of the upper extremity, several illustrations are given of the operation of resection of the head of the humerus through the axillary route, a procedure recommended in cases of suppurative arthritis.

The surgery of the extremities calls for little comment. The various procedures are most copiously and beautifully illustrated.

W. T.

The Statics of the Female Pelvic Viscera. Vol. I. By R. H. PARAMORE, M.D. (Lond.), F.R.C.S. Eng.; Major, R.A.M.C., &c. With 26 Illustrations, including 23 Plates. London: H. K. Lewis & Co. 1918. Demy 8vo. Pp. xviii + 383.

WE are well acquainted with Dr. Paramore's work on the Statics of the Female Viscera and with the pronounced and dogmatic views he holds. The present volume is an amplification, to a large extent, of a series of papers which he has already published in the Proceedings of the Royal Society of Medicine and in many leading journals.

The subject is treated from the academic standpoint. The author hopes in a succeeding volume to add chapters on the evidences of surgery to prove his dicta. The illustrations are chiefly borrowed from Halban and Tandler's work.

The main object of the book is to prove that the female pelvic viscera are supported by the pelvic floor, the latter being a composite structure, consisting of a bilateral musculature. The anatomy of the latter is minutely described.

"The pelvic floor is for us but the musculature, which, made up of individual muscles, occludes the pelvic outlet. We hold this view because we see in the musculature the real supporting mechanism—the actual floor. But the fascial sheets lining the internal aspects of the muscles, separating the muscles from the visceral mass, may also be regarded as part of the pelvic floor."

It is demonstrated that the position of the uterus depends, on the one hand, upon the existence of the surrounding visceral parts—on their volume, on the space they occupy, and on their mutual relations; and on the other, on the relations of these parts to the walls and floor of the pelvic cavity.

The hypothesists who hold that the cervical ligaments are the main supports of the uterus are dissected and buried. The author says that the consideration of the mere fact that these ligaments are difficult to cut through

at operation can teach nothing—except that they are difficult to cut through. He holds that they *might* support the weight of the uterus were the uterus an isolated organ, but as it is not isolated, they cannot do so. There has been a vast amount of time and energy expended by the author in proving his theory. Unfortunately, he is an over-enthusiastic theorist. In order to prove his points he repeats himself, and sometimes there is so much said on the same subject that his line of argument becomes involved, and the reader may become confused.

We shall not mention all the proofs given why the pelvic floor is the essential support and why the pelvic ligaments are not the essential supports. We shall leave the reader to buy the book. When he does so, he will find an investigator's work which is a most valuable addition to gynaecological literature, and will help in solving the (to us) still unsolved puzzle of the statics of the female pelvic viscera.

B. S.

Principles of General Physiology. By WILLIAM MADDOCK BAYLISS, M.A., D.Sc., F.R.S., &c. Second Edition, Revised. London: Longmans, Green & Co. 1918. Royal 8vo. Pp. xxiv + 858.

THE first edition of this treatise has been our constant companion both in the laboratory and in the study, and its usefulness to the reviewer can be gauged by numerous marginal notes of investigations suggested by the text. It is only Professor Bayliss who could handle so wide a range of subjects with such evident mastery.

The volume is no dry-as-dust catalogue of facts and theories. Every chapter, even when dealing with highly theoretical points, suggests practical applications in Biology and in Medicine.

In the new edition the chapters on muscular activity, on the kidney, and on the visceral nervous system have been considerably re-written.

The discussions of the colloidal state, of the action of the electrolytes, and of the reversal effects of drugs present

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much information, difficult to obtain without extensive reading.

The chapter on reflex action gives the best account of Sherrington's work that we have met with.

That on oxidation and reduction will prove most helpful to students of biology, for these processes present many difficulties, even to advanced students.

The bibliography, as we have proved on many occasions, is of extreme value.

The medical man who has even a slight acquaintance with modern advances will find much to interest him, although the more theoretical parts are hard to comprehend without previous practical work.

We hope that fresh editions will appear in order to bring future discoveries under the illuminating treatment which Professor Bayliss is so well qualified to give them.

While clinical work must ever hold the chief place in medical education, a book such as this demonstrates the importance of equipping the physicians and surgeons of the future with a thorough grasp of the results of modern biology.

The Elements of the Science of Nutrition. By GRAHAM LUSK, Ph.D., Sc.D., F.R.S. (Edin.). Third Edition, Reset. Philadelphia and London: W. B. Saunders Company. 1917. Pp. 641.

THE first edition of this book was published a decade ago, and, as might be expected, this edition shows many important additions to the facts of metabolism and needful revision of its theories.

Laboratory processes, aiming to elucidate the inner tissue processes in health and disease, have been applied to hospital patients in Germany for thirty years or more. In the United States great advances have lately been accomplished in this direction, and Dr. Lusk and his co-workers have carried out many important investigations, and the author ranks as a leading authority on the science of nutrition.

The United States Government has wisely appreciated the value of researches into dietetics and food economics, and has borne the cost of various laboratories devoted to the purpose of putting the laws of nutrition upon a sound scientific basis.

Dr. Lusk adopts Voit's definition of foods and food-stuffs—"A food is a palatable mixture of foodstuffs which is capable of maintaining the body in an equilibrium of substance. The ideal food is a palatable mixture of food-stuffs arranged together in such proportion as to burden the organism with a minimum of labour."

The book is undoubtedly one of high value, and should take a place in the library of every physiologist and pathologist. It is more adapted as a book of reference than for continued study, for it is crammed with details, and contains many tables of dietaries and of physiological data which, however useful, are somewhat indigestible and heavy reading. Rightly to follow the text, a knowledge of modern organic chemistry is requisite.

In regard to the much disputed question of the value of alcohol as a food, it is interesting to know the author's views. He considers that Atwater and Benedict have conclusively shown that alcohol may be used in the economy in place of isodynamic quantities of carbohydrates and fats. In their experiments on a resting individual which lasted 23 days, the metabolism of the individual as expressed in calories was unchanged by the addition of alcohol to the diet. The alcohol (corresponding to a bottle of claret) was given in six small doses, and 98 per cent. was burned by the organism.

In general, it may be said that alcohol as a stomachic is valueless when the gastric juice is normal, but is beneficial in cases of supersecretion, hypochlorhydria, and loss of appetite.

Under these circumstances small amounts of beverages containing 5 to 10 per cent. of alcohol are sufficient for all purposes. Lusk recognises, of course, the social evils which accompany the excessive use of alcohol as a

beverage, and believes that the Utopia of total abstinence would probably make for the public weal.

The metabolism in diabetes is very fully discussed, but on this point opinions are divided, and we are still far from finality. In a severe case of diabetes metabolism stands thus:—"Sugar cannot burn, fat burns only as far as β -oxybutyric acid, and as for protein, part of its amino-acids are converted into sugar and another part into β -oxybutyric acid, neither of which can be burned."

The modern method of treating diabetes, known as the "Allen Method," is described. It is certain that Allen was the first to introduce a rigorous *régime* of fasting until the diabetes patient becomes free from urinary sugar and from acidosis. The method is not an infallible cure, for Joslin, who warmly advocates it, has reported 14 cases which did not yield to the treatment. When successful, "at one stroke the patient is delivered from medicines, patent or otherwise, sham kinds of treatment, gluten bread, and in 99 cases out of 100, of alkalies."

We can heartily recommend this instructive work to the attention of our readers.

Handbook of Operative Surgery. By WILLIAM I. DE C. WHEELER, M.D., F.R.C.S.I., Lt.-Col., R.A.M.C.; with an Introduction by SURGEON-GENERAL SIR ALFRED KEOGH, G.C.B. Third Edition. London: Baillière, Tindall & Cox. 1918. 8vo. Pp. 372. Figs. 226.

THE first and second editions of Colonel Wheeler's book were produced to assist students in the course of operative surgery and dealt altogether with the dead subject. All who have been in touch with students since the first edition was published recognise the value of the book. It was relatively small, written in clearly expressed language, and did not weary the reader with a mass of unnecessary detail. The subject-matter was chosen with the nicest discrimination, so that the book as a whole fulfilled a real need, of which its popularity was evidence. We rather wish that the

author had left the book as it existed in its second edition, and had produced a similar volume on the surgery of the living for the use of graduates. But the stress of military work renders the present time inopportune for the fulfilment of such a hope.

The author has attempted to bridge the gulf between the surgery of the dead and that of the living by widening the field of vision, and by introducing descriptions of operations not usually performed on the dead subject.

The book opens with a note on the methods of producing local and spinal anæsthesia, which methods the newly-qualified man must thoroughly understand if he is to take his place amongst surgeons. The greater part of the book deals with amputations and the ligature of arteries, and it is noteworthy that the author gives a description just long enough to enlighten and not long enough to weary or confuse the reader. Operations on the bladder, the stomach, the rectum and the head are described sufficiently to give the student an adequate idea of the scope of surgery in these regions, and to help him in carrying out many procedures himself. The book is characterised, as are all Colonel Wheeler's writings, by clarity of expression, vigour of thought, and freedom from convention. We congratulate the author and the publisher on the production of a book unique in its scope, and one which is destined more than any we know to assist the student who is passing from the Medical Schools into the Navy or Army.

Rules for Recovery from Pulmonary Tuberculosis: A Layman's Handbook of Treatment. By LAWRASON BROWN, M.D. Second Edition. Philadelphia and New York: Lea and Febiger. Pp. 184.

THIS little book, the author tells us, has been written primarily for his own patients to help them to avoid the blunders and to understand the principles associated with the modern treatment of this disease. It is divided into twenty-five chapters or essays on topics of vital importance to the sufferer, comprising such apparently simple subjects

as rest, food, fresh air, exercise, body-weight, &c. These are treated in a simple, non-technical, but eminently readable manner, and the author's advice is quite sound—namely, that the book should not be hastily read and laid aside, but slowly absorbed by degrees, and then continued as a work of reference.

The book, as we have said, has been written for the patient, and the physician will not find much new information on the subject, but he will find numerous hints on treatment, particularly those minutiae which we find it so difficult to remember to tell the patient during our interviews, or which we have not the time to explain at the requisite length. The treatment described is mainly what we understand as "sanatorium," and there are few references to other forms of therapeutics. The author's opinion of tuberculin appears to be summed up at the end of his short chapter on that subject: "When given carefully it may help the patient and will do him no harm."

The book may be placed in the hands of an intelligent patient with safety and advantage.

The Refraction of the Eye. A Handbook for Students.

By ERNEST CLARKE, M.D., F.R.C.S.; Ophthalmic Surgeon to the King George Hospital, Queen Alexandra Hospital for Officers, &c.; Consulting Surgeon to the Central London Ophthalmic Hospital, Consulting Ophthalmic Surgeon to the Miller General Hospital. Fourth Edition. One Coloured Plate, 92 Figures in text. London: Baillière, Tindall & Cox. 1918. Pp. viii + 243.

THIS is one of the best guides we have, and it has already proved its worth by passing through four editions. Beginning with a short, simple account of refraction, prisms, and lenses, the student has laid before him the optical properties of the normal eye: accommodation, binocular vision, convergence; and then the ophthalmoscope is fully and well explained. From thence we pass to the correction of the various kinds of ametropia, strabismus, &c.

The teaching is well done and the explanations are full,

and capable of being understood by any student. The diagrams are clear and explanatory. Not the least interesting part of this book is the series of illustrative cases at the end, in which we find frequent confirmation of the efficacy of very low cylinders, constantly worn, in banishing such troubles as epilepsy, dyspepsia, and spinal pain.

The book well deserves the success it has attained, for it gives a short, clear, and readable account of the errors of refraction and accommodation and how to treat them.

Clinical Diagnosis. A Manual of Laboratory Methods. By JAMES CAMPBELL TODD, M.D., Professor of Clinical Pathology, University of Colorado. Fourth Edition, revised and reset. Philadelphia and London: W. B. Saunders Company. 1918. 12mo. Pp. 687, with 232 text-illustrations and 12 coloured plates.

THAT this is a successful text-book is sufficiently evident from its record. First published ten years ago, it reached a second edition in January, 1912, and a third edition in October, 1914—the second edition being reprinted in July, 1913, and the third in January, 1916, and September, 1917. The present fourth edition, revised, entirely reset and reprinted, was copyrighted in June of the present year.

As in previous editions, chief emphasis has been laid upon methods and microscopic morphology. Judicious excision has been practised in order to make room for much important additional matter, which is widely scattered throughout the book. The author in his preface makes special reference to some of the changes. At pages 116 to 120 will be found a description of colorimetric methods of urinary examination, which, he claims, combine comparative simplicity and great accuracy, and are steadily growing in favour. Sections dealing with the new Bass and Johns concentration method for malarial parasites, the fractional method of gastric analysis, the vital staining of blood-corpuscles, and the resistance of red corpuscles have been included.

As a satisfactory substitute for the colloidal gold solution

test for the cerebrospinal fluid introduced by Lange in 1912, the gum-mastic solution test is described at pages 528 to 530. This reagent is inexpensive and easily made, and the test is equally easy and satisfactorily applied. In Chapter V. the Wilber and Addis method for the quantitative estimation of urobilin in the fæces as an aid in the diagnosis of pernicious anæmia is mentioned as probably the most useful clinically. While it does not give the actual quantity of urobilin, it furnishes a rough comparative method which works very well in practice. In the same section the author describes the estimation of the pancreatic ferments in fæces, and details are given of the process whereby amylase in particular is estimated. In the chapter on the urine the same method is adopted, with modifications, and it is pointed out (page 148) that the amount of amylase present in the urine is somewhat influenced by the diet, while it is diminished in pancreatic disease and in nephritis with deficient renal permeability.

An outstanding and most useful feature in this beautifully printed book is the number of illustrations. There are twelve coloured plates and no fewer than 232 illustrations in the text. All are highly artistic, and possess very great educational value.

The closing chapter in the book (X.), on "serodiagnostic methods," is from the pen of Professor Todd's colleague, Ross C. Whitman, B.A., M.D., Professor of Pathology in the University of Colorado. It has been revised by Professor Whitman, and presents a concise and intelligible account of a difficult subject.

A Handbook on Antiseptics. By HENRY DAKIN and EDWARD DUNHAM. London: Macmillan & Co. 1917. Pp. 126.

ALL surgeons form for themselves an estimate of the relative values of the antiseptics that they use. This estimate is based on clinical observation. The authors in this little Handbook on Antiseptics give a clear account of most of the modern antiseptics and their relative values

from the point of view of laboratory experiment. While this is not quite the same thing as bedside observation, yet much may be learned from it, and many hints that will be of use to the surgeon are to be found in the book.

In most cases the opinion of one or more eminent surgeons as to the value of a particular antiseptic is given, and this increases the usefulness of the book.

A Manual of Chemistry: Theoretical and Practical; Inorganic and Organic. By ARTHUR P. LUFF, M.D., B.Sc. Lond., F.R.C.P., F.I.C., Consulting Physician to St. Mary's Hospital; and HUGH C. H. CANDY, B.A., B.Sc. Lond., F.I.C. Lecturer on Chemistry in the London Hospital College and in East London College, &c. With 64 illustrations. Sixth Edition, enlarged. London: Cassell & Company, Ltd. 1918. Cr. 8vo. Pp. xix + 745.

THE fifth edition of this readable manual was published in January, 1915, and favourably noticed in the May number of this Journal for that year. It was reprinted in July, 1917—a token of its just popularity.

Among the many changes and additions in the present edition none are more important than those in Part IV., which deals with Organic Chemistry. In that part, the sections relating to the carbohydrates under the headings "Amylons" and "Sugars" have been expanded. The cyanogen group receives an extended notice in Chapter IX., including urea, uric acid, and the amino-acids, which result from the hydrolysis of proteins, nascent hydrogen in this case reducing cyanides to amines.

Part VI., which deals with Practical Chemistry, has also been considerably enlarged. It now includes general methods for the preparation of acids, bases, and salts. Full directions for qualitative and quantitative analysis are given, suitable for a two-years' course of instruction.

We can but repeat the opinion we expressed when noticing the fifth edition—namely, that "the book can certainly be recommended as a very useful manual for both medical and pharmaceutical students."

The Year Book of the Scientific and Learned Societies of Great Britain and Ireland : A Record of the Work done in Science, Literature and Art during the Session 1916-1917 by numerous Societies and Government Institutions. Compiled from Official Sources. 34th Annual Issue. London : Charles Griffin & Co., Ltd. 1917.

AN Annual that has attained to its thirty-fourth year of publication must be considered as having supplied a public want, and its absence would cause a great loss of time and much inconvenience.

The preface states no more than an acknowledged truth in its assertion that "every department of Science, Literature, and Medicine is served by this volume." The fourteenth section of the book is occupied with the subject of Medicine, and is of more than usual interest, in that it shows how fully our professional brethren at the front have been availing themselves of the opportunities the war has furnished for studying the many ills that the abnormal conditions of life in active service is liable to. Its thirty-four years of publication is a recommendation superior to that which any reviewer could give.

Catechism Series: Midwifery. By R. MARY BARCLAY, M.B., &c. Second Edition. In Two Parts. Edinburgh : E. & S. Livingstone. 1918. Pp. 152. Wrappers.

THERE is a good deal of useful information in these little books, but, taking them as a whole, we believe they may do more harm than good. If the student reads them for his examination he gets a scrappy knowledge that is worse than none. If the accoucheur carries them with him to a case, we fear that if he relies on this *Aid to Midwifery* his patient will suffer. Sometimes he may be helped, but the advice given baldly for some conditions—notably the hæmorrhages—will scarcely afford that practical aid for which the practitioner naturally looks in the presence and stress of an emergency.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

BOOK-PLATES OF IRISH MEDICAL MEN.

By MACDOWEL COSGRAVE, M.D. Dubl., F. & Ex-Pres.
R.C.P.I.

A BOOK-PLATE is a label bearing a name, arms, crest, monogram, portrait, or other design pasted into a book to indicate its ownership, position in a library, &c. It is often called an "Ex Libris" from these being the first two words so commonly engraved upon it.

Book-plates date from the 15th century, and at first, like the books of the time, were printed from cut wood blocks. The earliest English book-plate is of this kind ; it was engraved in 1574 to be placed in volumes presented to Cambridge University by Sir Nicholas Bacon.

Book-plates vary from a simple printed label bearing the owner's name, through many grades up to elaborate etchings or engravings designed and executed by famous artists, and so may derive value not only from rarity and personal association, but also from artistic quality.

The earlier book-plates exhibited armorial achievements, and formed the simplest means of identification at a time when the many were unable to read and the few wrote atrocious hands.

Armorial book-plates are still numerous, but have lost much of their old significance, as modern coats of arms are more often assumed than achieved.

In armorial book-plates, crest, shield, or both may be used ; if this is all, it is called a plain armorial. Sometimes in Ireland a background of clouds is added, this form does not seem to have been used in other countries. Armorial may be ornamented by the addition of helmet and mantling, the more

elaborate falling under the headings of Jacobean, Chippendale and Adam, the last including those with festoons, wreath and ribbon, or palms.

Pictorial book-plates form the next largest class, and in recent time have come into common use. They often contain armorial bearings, but are mainly decorative, and views, portraits, allegorical subjects, illustrations of the tastes and pursuits of the owner may be included. The most famous artists have not disdained to design and execute this class of plate.

An interesting variety is a book-pile. This may be simply a sketch of a number of books or the owner's writings, favourite authors and works may be introduced.

On the Continent medical men frequently use what may be termed "medical" book-plates, introducing skulls, instruments, and other emblems of their profession. These are often unpleasing and sometimes gruesome. "Medical" plates are common in America, but in better and more pleasing taste. In the British Isles such plates are seldom seen, the pictorial plates of doctors dealing with their fads and relaxations, rather than their professional labours.

Amongst Irish medical men "medical" plates are almost unknown, the great majority using armorials.

Of the 131 examples in the following list, 111 are armorial, 7 pictorial armorial, 1 pictorial medical, 6 pictorial, 6 labels, &c. These figures may be contrasted with those shown in "The Book-plates of Physicians," by Roland G. Curtin, M.D., Philadelphia, 1907. Out of 206 such plates in the author's collection more than one-third were "medical" and only slightly over one quarter armorial. There were no Irish plates in Dr. Curtin's list.

A List of "Book-plates of Medical Men (British and American)," by Geo. C. Peachey, appeared in the *Ex Libris Journal*, 1901-2. "Irish Book-plates in order of Counties" appeared in the same Journal in 1905.

The Franks' Collection, bequeathed to the British Museum in 1897, contains nearly 70,000 varieties, more than half being British and American. A catalogue of this great collection is printed.

Book-plates form a fascinating collection. They are of great interest and variety—more than 100,000 being known.

They are easily obtained, easily arranged, and easily stored.

To start a collection it is only necessary to get a book-plate of your own. Other collectors will exchange theirs for yours, and, if your book-plate is a good and interesting one, the nucleus of a collection will soon be formed; afterwards by general exchanges this collection can be extended and developed on selected lines.

When the war is over it is hoped that a *Century Book-plate Club* may be formed with its headquarters in Dublin. This is intended to encourage new collectors and rouse up the interest of old. The idea put shortly is to have a hundred members who will treat themselves to book-plates, or, if they already have them, to new ones. Each book-plate is to bear the Club mark and the member's number. Each owner will send a hundred of his plates to the Secretary, who will send in return the hundred different plates belonging to the members. Names received will be placed on the "Waiting List."

Those of artistic talent may like to design their own plates. Dr. Arthur W. Clark, Medical Officer of Health, St. Lawrence, Kansas, has set a good example, as up to the present he has designed 75 plates, many of them for professional brethren.

The following list is necessarily incomplete. The compiler will be grateful for additions and corrections, which will be entered on a supplementary list.

In order to economise space, only such particulars are noted as help to identify the owner and indicate the period at which he flourished.

Many fellow-collectors have helped in compiling this list. Special thanks are due to Messrs. J. J. Carton, William Chamney, Henry Harden, Percy Kirkpatrick, and Thomas U. Sadleir.

ADAMS.—*Armorial*. In MS. "Chas. Jas. Adams, Shenan House, Co. Cavan."

ANDERSON.—*Armorial*. "John Anderson, M.D. *P. Simms sculpsit et dono dedit ob filiam unicam a morbo vindicatam.*" (In 1733 P. Simms advertised from Crown Alley, Dublin: "Gentlemen and Ladies may have their Coats of Arms curiously engraved for their books or on Plate." Dictionary of Irish Artists. Strickland. II. 354.

ATTERIDGE.—*Armorial*. “John Joseph Atteridge, M.D., M.Ch., etc., R.U.I., d.d. ex libris patris sui.” London. Thomas Henry Attridge, Cork. MDCCCXCI. (J. J. Atteridge, now of London, was at one time Assistant-Surgeon to Cork Eye, Ear and Throat Hospital.)

AUCHINLECK.—*Armorial-Adam*. “Auchinleck.” (An old family plate now used by Hugh A. Auchinleck, F.R.C.S. 1881.)

BANKS.—*Armorial-conjoint shields, mantling*. “Sir John Banks, K.C.B.” (M.D. Dub. 1843, P.K.Q.C.P. 1869–70.)

BARTON.—*Printed label, plain line border*. “John Kellock Barton.” (P.R.C.S. 1882–3.)

BEATTY.—*Pictorial—Canting armorial*. “J. Beatty, M.D.” Crest above a shield charged with a bee-hive, and leaning against a tree; globe, &c., on ground. (In 1811 lived in South Anne Street.)

BELL.—*Armorial in garter*. In MS. “Thos. Bell, M.D.” Signed “Green, Cork.” (M.D. Edin, 1783. L.K.Q.C.P. 1784. Lived in York Street, and afterwards in Bishop Street.)

BIGGER.—*Armorial*. “S. Lennox L. Bigger.” F.R.C.S.I. (Author of ‘The Prophet of Fire,’ ‘The King of Terrors,’ and other volumes of verse.)

BLACKHALL.—*Crest*. “Edmd. Blackhall, M.D.” (L.K.Q.C.P. 1756. Lived in Lower Abbey Street.)

BOOKEY.—*Armorial, helmet and mantling*. “Richard Bookey, M.B.” (M.B. Dub. 1868. F.R.C.S. 1873.)

BRERETON.—*Armorial, helmet and mantling*. “William Westropp Brereton.” (L.K.Q.C.P. 1865. Galway.)

BROOKE.—*Armorial*. “William Brooke, M.D.” (P.K.Q.C.P. 1826–7.)

BROWNE.—*Armorial with mantling*. “Henry Peter Browne.” Practised in Delgany middle of nineteenth century.)

BROWNE.—*Armorial with mantling*. “Henry Peter Browne, Esquire, M.D., F.R.C.S.E., LL.D., M.K.Q.C.P.I., L.R.C.S.I.” (Same plate as above with extended inscription.)

BROWNE.—*Armorial—Adam*. “John Browne, Esqr., M.D.” (M.D. Edin. 1814. L.K.Q.C.P. Practised in Cavan, later in Dublin.)

BULLEN.—*Armorial on clouds*. In MS. “William Bullen, M.D.” (M.D. Edin. 1792. Cork.)

BURKE.—*Armorial, helmet and mantling*. “Dr. Wm. Burke. Vol. . . . cost” (L.K.Q.C.P. 1863. Registrar-General.)

CHARLES.—*Crest under motto*. “D. Allen Charles, M.D.” (M.D.Q.U.I. 1875. Ballaghy, Co. Londonderry.)

CLARKE.—*Armorial, helmet and mantling*, supporting two crests. With “Spurs, 1513,” above. “Sir Arthur Clarke, M.D., N. Great George’s St., Dublin.” Physician to S. George’s Dispensary and House of Recovery. Ob. 1857, aged 84.

COSGRAVE.—*Printed label*. “E. MacDowel Cosgrave, A.B., M.D., &c.” “It is to him this book belongs, Him and himself the thief wrongs.”

COSGRAVE.—*Pictorial*. Dexter hand palmways in frame. Process. "E. MacDowel Cosgrave, M.D. Dub., F.R.C.P.I., Hon. Assoc. S.J.J., Professor of Biology R. Coll. Surgeons. 5 Gardiner's Row, Dublin. 1892."

COSGRAVE.—*Pictorial*. Dexter hand palmways—etched and engraved. "E. MacDowel Cosgrave, M.D., Knight of the Order of St. John of Jerusalem, 5 Gardiner's Row, Dublin, 1898." Arms of the Order engraved below. (Photo-etching by * Joseph Lewis, engraving by Henry Kirkwood.)

COSGRAVE.—*Pictorial—Armorial*. "MacDowel Cosgrave, Præsidis Collegii Medicorum Regii Hiberniæ." S. Luke's Days, 1914-15. (Shield with Arms granted to the College by Chas. I. in 1626; arms of owner introduced in mantling. Drawn by J. Dignam, engraved by J. Webster.)

COSGRAVE.—*Pictorial*. Same plate, with "Die Sancti Lucae A.D. 1914-15" inserted and owner's arms corrected.

COSGRAVE.—*Joint Pictorial Book-pile*. Named writings of owners. "E. & A. MacDowel Cosgrave, 1905." (Engraved by J. Webster.)

COSGRAVE.—*Printed label*. "MacDowel Cosgrave, M.R.I.A., F.R.S.A.I." "To Borrow is Human. To Lend is Humane. To Return is Divine." "If you love books and are a friend, 'Tis yours to borrow, mine to lend: But pray read straightway, so it may Regain its shelf without delay."

CROKER-KING.—*Armorial—Chippendale*. "Samuel Croker" —"King" added in MS. (First President R.C.S. 1784-5. Added "King" to his name about 1763 on receiving a legacy.)

CROLY.—*Armorial on clouds*. "Henry Croly, M.D." (Rathfarnham. In 1846 edited a Medical Directory for Ireland. Died 1893, aged 86.)

CROLY.—*Armorial on clouds*. "Henry Croly, M.D., F.R.C.S.I., J.P." (Same plate with extended titles.)

CROSSLE.—*Pictorial—Armorial*. The badge of the Provincial Grand Lodge of Freemasons being introduced. "Francis C. Crosslé, M.B." (M.B. Dub. 1871. Newry, Co. Down. Designed by J. Vinycomb.)

CRUISE.—*Armorial—Chippendale*. "Francis Cruise." (P.K.Q.C.P. 1884-5.)

CRUISE.—*Armorial—Chippendale*. "Sir Francis R. Cruise, M.D." (Same plate with inscription altered.)

CRUISE.—*Armorial—Chippendale*. "Sir Francis Cruise, D.L., M.D." (Smaller plate of same design.)

DALY.—*Crest—Greyhound and tree on clouds*. In MS. "Mark W. Daly, M.D." (Kingstown.)

DAY.—*Armorial*. "Richard D. Day, M.D., Glenbrook." (M.D. Edin. 1836.)

DAY.—*Armorial—Shield supported by knight*. "R. Welsted Day, M.D., Glenbrook." Signed "Green." (Old plate dating from 1790.)

DELANY.—*Armorial, helmet and mantling*. "Dr. William Delany, J.P., Bagnalstown." (Engraved by Henry Kirkwood.)

DENHAM.—*Armorial—Chippendale*. “John Denham, M.D., Dublin.” (M.D. Edin. 1831. P.R.C.S. 1873–4. Died 1871, aged 91. Engraved, Kirkwood.)

DUANY.—*Armorial*. “Narcissus Duany, Chyrurgus, Dublinensis.” (Surgeon to Charitable Infirmary, Cook Street. Engraved by Edward Lyons, who in 1753 advertised “Gentlemen distant from Dublin, by sending proper instructions to Mr. Lyons, may have their arms, &c., neatly engraved for marking their books.” Strickland’s Dictionary of Irish Artists, II., 39.)

EGAN.—*Embossed stamp, oval*. “Richard W. Egan, Licentiate, Royal College of Surgeons, Ireland, 15 Talbot Street, Dublin.”

FINNY.—*Armorial per pale, helmet and mantling*. “John Magee Finny” (P.R.C.P. 1890–1.)

FINNY.—*Armorial with mantling*. (Corrected arms, no name.)

FITZGERALD.—*Pictorial armorial*. Emblematic of work as Oculist, and of artistic tastes. “Charles Edward Fitzgerald.” (P.R.C.P. 1912–3. Died 1916. Process from drawing by Rev. Wm. Fitzgerald.)

GEARY.—*Armorial with mantling*. “William J. Geary, M.D., Limerick.”

GILROY.—*Armorial on clouds*. “Peter Gilroy, M.D.”

GRAVES.—*Crest in garter*. “C. Dampier Graves, M.D.” M.D., R.U.I. 1884. Co. Tyrone.)

HADDEN.—*Armorial*. “John Evens Hadden.” (L.A.H., 1832. Co. Wexford.)

HALLIDAY.—*Armorial—Adam*. “Daniel Halliday, M.D.” M.D. Edin. 1819. Irish motto.

HALLIDAY.—*Armorial—Adam*. “Daniel Halliday, M.D., M.R.I.A.” (Same plate.)

HAMILTON.—*Armorial—Chippendale*. “Archibald Hamilton, M.D.” (M.D. Dub. 1761.)

HAMILTON.—*Crest*. “Francis Dancey Hamilton, Surgeon Co. Meath Infirmary.” (L.R.C.S. 1837. Navan.)

HARDY.—*Armorial on clouds*. “Samuel L. Hardy, M.D. No. . . .” (L.K.Q.C.P. 1852. Dublin.)

HARTIGAN.—*Armorial—Adam*. “William Hartigan, M.D.” (P.R.C.S. 1897. Prof. Anat. and Surg. Dub. Died 1912.)

HEENAN.—*Armorial—Chippendale*. “John Heenan, Parsonstown.”

HENRY.—*Armorial on clouds*. “James Henry, M.D.” (M.D. Dub. 1832. Author of works on Virgil.)

HOLMES.—*Pictorial armorial*. “Arthur Holmes.”

HOPKINS.—*Pictorial armorial*. Shield against tree, charged with three pistols, &c. “Francis Hopkins, M.D.” (Athboy, Co. Meath.)

HUDSON.—*Armorial—Crest in circle*. “Edward G. Hudson.” (The Manor, Glanville, Co. Cork.)

HUTCHINSON.—*Armorial—Chippendale*. “F. Hutchinson, M.D.” (P.K.Q.C.P. 1777–80. Died 1784.)

JOYNT.—*Armorial with mantling*. "Christopher Joynt, M.D." (M.D., Q.U.I. 1855. F.K.Q.C.P. 1880. Bombay Medical Service. Died 1915, aged 87. Engraved Geo. Kirkwood.)

KENNEDY.—*Armorial*. "G. A. Kennedy, M.D." (P.K. Q.C.P. 1838-40. Died 1865.)

KIDD.—*Armorial*. "Frederick W. Kidd." (M.D. Dub. 1887. Prof. Midwifery, R.C.S. Died 1917. Same plate as following.)

KIDD.—*Armorial*. "G. H. Kidd, M.D." (P.R.C.S. 1876-7. Died 1895.)

KIDD.—*Armorial, helmet and mantling*. "William L. Kidd, M.D., Armagh." (M.D. Edin. 1818. Died 1851. Signed "Mould, Edin.")

LABATT.—*Armorial*. "Saml. B. Labatt, M.D." (M.D. Edin. 1797. F.K.Q.C.P. 1829. Master of Rotunda.)

LAWLOR.—*Armorial*. "William Hilliard Lawlor, M.D." (M.D. Glas. 1828. L.R.C.S. 1829. Tralee, Co. Kerry. Died 1883.)

LEE.—*Armorial—Shield and mantle*. "Thomas Lee, M.D." Irish motto.

LITTLE.—*Armorial—Crest in garter*. "Thomas Evelyn Little, M.D., T.C.D., &c." (University Anatomist, Dub.).

LITTLE.—*Armorial—Crest in garter*. "William Swayne Little, M.D., T.C.D., &c." (Surgeon Co. Infirmary, Sligo. Died 1876. Engraved by George Kirkwood.)

LITTLEHALES.—*Armorial*. "Edmund Littlehales, M.D." (Engraved by Lyons. Strickland's Dictionary, II., 39.)

LUCAS.—*Armorial*. "Charles Lucas, M.D." (M.D. Leyden 1752. M.P. City of Dublin 1761. Died 1771. This plate has been reproduced by J. Vinycomb.)

LUCAS.—*Armorial—Jacobean*. "Carolus Lucas, Pharm. Dub."

M'CLELLAND.—*Armorial on clouds*. "Richard M'Clelland, M.B. No. . . ." (M.B. Dub. 1842. Co. Wicklow.)

M'CLINTOCK.—*Armorial—Impaled*. "Alfred Henry M'Clintock, M.D." (M.D. Glasg. 1844. P.R.C.S. 1880. Died 1881.)

M'DOWALL.—*Crest over monogram in cartouche*. "John M'Dowall, M.D." (M.D. Dub. 1837. Died in Dublin 1841.)

MADDEN.—*Crest on coronet with helmet*. "Richard Robert Madden." (Author of "Lives and Times of the United Irishmen." Practised in London and Dublin. Died 1880.)

MADDEN.—*Armorial*. "Thomas More Madden, M.D., 55 Merrion Square, Dublin." "O'Madden" in Irish characters.

MADDEN.—*Armorial*. "William Madden, M.D." (M.D. Glas. 1841. Governor Apothecaries Hall. Died 1866. Same arms as above.)

MADDEN.—*Armorial—Crest on coronet*. "William Madden, M.D."

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MAHOOD.—*Armorial, helmet and mantling*. "Allen Edwd. Mahood, M.D." (L.A.H. 1829. M.D. Glas. 1837. Kingstown, Co. Dublin. Died 1871.)

MARSH.—*Armorial*. "Sir Henry Marsh, Bart." (P.K.Q.C.P. 1841-2 and 1845-6. Died 1860.)

MEADE.—*Armorial*. "Horace T. N. Meade, M.D. Trin. Coll. Dub."

MERRIMAN.—*Armorial*. "Sam. Merriman, M.D." Engraved in autograph.

MINCHIN.—*Armorial*. "John T. Minchin."

MOLONY.—*Armorial*. "Henry Molony, M.D."

MOLYNEUX.—*Armorial—Jacobean*. "Thomas Molyneux, M.D., of Dublin." (M.D. Dub. 1687. Bart. 1730. Founded the Molyneux Asylum for Female Blind. Died 1733.)

MOORE.—*Armorial, helmet and mantling*. "E. Libris Johannis Guilelmi Moore. Equitis Aurati. A.D. 19 . . ." (D.L., P.R.C.P. 1898-9. Engraved Jack, Edinburgh.)

MOORE.—*Stencil*. "J. W. M." (Used by grandfather of above.)

MORGAN.—*Crest*. "Thomas Carolus Morgan, M.D. Coll. Reg. Med. Lond. Socius." (M.D. Cantab. 1809. F.R.C.P.L. 1810. Married Sydney Owenson, the Irish Novelist, who, as Lady Morgan, wrote well-known Memoirs.)

MORGAN.—*Crest*. "Sir T. Charles Morgan, M.D., Fellow of the College of Physicians, London."

MORRISON.—*Crest—Name label*. "William Morrison." (L.R.C.S. 1868. Rathfriland, Co. Down.)

O'CONNOR.—*Armorial—Chippendale*. "Maurice O'Connor, M.D." (M.D. Edin. 1831.)

O'NEILL.—*Pictorial armorial*. "Henry O'Neill, M.D., J.P." (M.D., Q.U.I. 1877. Belfast. Designed J. Vinycomb.)

O'NEILL.—*Armorial with supporters*. "Wm. O'Neill, M.D." Motto, "Lam Deare Eirin." (M.D. Edin. 1843. Mitchelstown.)

ORPEN.—*Armorial*. "T. H. Orpen, Esq., M.D." (M.D., Edin. 1797. P.K.Q.C.P. 1812 & 18.)

PALMER.—*Armorial*. "J. Mansergh Palmer." (F.R.C.S. 1880. Surgeon County Infirmary, Armagh.)

PORTER.—*Printed label*. "William H. Porter." (M.D. Dub. 1842. P.R.C.S. 1838. Died 1861.)

QUIN.—*Armorial—Adam*. "Chas. Wm. Quin." (M.D. Edin. 1779. P.K.Q.C.P. 1788. Died 1819.)

REID.—*Armorial*. "Robt. Reid, Esq., M.D." (M.D. Dub. 1839. Dublin.)

RELHAN.—*Armorial*. "Anthony Relhan, M.D." (M.D. Dub. 1743. Moved from Dublin to Brighton 1761, vacating his F.K.Q.C.P. by non-residence. Died 1776.)

ROBINSON.—*Armorial with mantling*. "Robert Robinson, 17 . . ." "40" is added in MS. in one copy. (State Physician 1742. F.K.Q.C.P. 1748. Died 1770.)

SARGINT.—*Armorial*. “Sargint.” In one copy “R” is written before and “M.B.” after the surname. (Richard Strong Sargint, M.B. Dub. 1832. F.K.Q.C.P. 1842. Physician to Whitworth Hospital, Drumcondra.)

SCOTT.—*Armorial—Chippendale*. “Robert Scott, M.D.” (Obstetrician, Dublin, late in 18th century.)

SCOTT.—*Armorial—Chippendale*. “Robertus Scott, Medicinae Doctor et Accoucheur.” (Same plate with varied inscription.)

SCOTT.—*Armorial—Adam*. “Sir Robert Scott, M.D.”

SHAW.—*Armorial*. “Vesey Shaw, Surgeon.” University Anatomist Dub. 1733–43. Died 1747. (Probably engraved by Edward Lyons.)

SHENBRIDGE.—*Armorial—Chippendale*. “Joseph Shenbridge, Chirurgeon.”

SINCLAIR.—*Armorial in Chippendale frame*. “Thomas Sinclair, M.D.” (M.D., Q.U.I., Prof. Surgery, Belfast. Designed by J. Vinycomb.)

SKIPTON.—*Crest*. “Henry T. Skipton, M.D.” (M.D. Edin. 1840. Londonderry.)

SMITH.—*Armorial on clouds*. “Aquilla Smith, M.D., M.R.I.A.” (M.D. Dub. 1839. F.K.Q.C.P. 1839. Prof. Mat. Med. Dub.)

SMITH.—Same plate with “Vol. . . . Cost” added.

SMITH.—*Armorial on clouds*. “Walter G. Smith, M.D.” (P.R.C.P. 1892–95. Prof. Mat. Med. Dub. Same plate with altered inscription.)

SMYLY.—*Armorial on clouds*. “Philip Crampton Smyly.” (P.R.C.S. 1878–9. Died 1901.)

SOLOMONS.—*Pictorial—Medical*. “Bethel Solomons.” (F.R.C.P. 1914. Designed by Louisa R. Jacobs.)

SPROULL.—*Armorial—Chippendale*. “Francis Sproull.” (M.B. Dub. 1823.)

SPROULL.—*Armorial—Adam*. “John Sproull, M.D.” (M.B. Dub. 1832.)

STEPHENS.—*Pictorial armorial, shield in landscape*. “Francis Stephens.”

STEPHENS.—*Armorial—Jacobean*. “William Stephens, M.D., F.R.S.” (P.K.Q.C.P. 1733 and 1742. Published a Botany, on which subject he lectured in T.C.D. Died in 1760.)

STOKER.—*Armorial, helmet and mantling*. “Sir William Thornley Stoker, Knt.” (Designed by Neville R. Wilkinson. 1909.)

SWAN.—*Armorial*. “Joseph Swan.”

SWAN.—*Armorial*. “Joseph William Swan.”

TICHBORNE.—*Armorial with mantling*. “Chas. R. C. Tichborne.” (L.R.C.S., Governor Apothecaries Hall. Died 1904, aged 65.)

TOWNSEND.—*Armorial—Chippendale*. “Edwr. R. Townsend, M.D.” (Cork.)

TOWNSEND.—*Armorial—Chippendale*. “Francis E. Townsend. M.D.” (Cork.)

TIPPER.—*Armorial—Chippendale*. “Gulielmus Tipper, Chirurgeon, Dublin.” (In 1761 appointed Assistant Surgeon, Infirmary, Inns Quay.)

TWEEDY.—*Armorial—Adam*. “Henry Tweedy, M.D.” (Passed College of Surgeons, London, 1836. Died 1906, aged 95. An older plate with this name substituted.)

TWEEDY.—*Armorial, helmet and mantling*. “Henry Colpoys Tweedy.” (F.R.C.S. 1873. F.K.Q.C.P. 1889. Died 1917, aged 70.)

TWEEDY.—*Armorial, helmet and mantling*. Octavo. “Henry Colpoys Tweedy of Cloonamahon, in the County of Sligo, Esquire, M.D.”

WILMOT.—*Armorial on clouds*. “S. Wilmot.” (P.R.C.S. 1815 and 1832. Died 1848, aged 76.)

WRIGHT.—*Pictorial*. “E. Percivalis Wright, M.D., Mané Seychelles.” (Prof. Botany Dub. Shows owner’s bungalow at Mané. In border are marine forms he had discovered or elucidated. Desig. J. Vinycomb.)

OLIGURIA OF CARDIAC ORIGIN.

IN *La Presse médicale*, Paris, for August 15, 1918, Josué and Parturier discuss the clinical consequences of oliguria of cardiac origin, especially the retention of nitrogenous waste and retention of water, the latter entailing hydræmia and visceral and interstitial œdema. The urine with asystole is scanty, rich in urea, but with little chlorides as the latter are retained to make the retained water isotonic. The urea content of the blood is so high from the oliguria alone that it may suggest pathological conditions in the kidneys when in fact they are still sound. If the heart recuperates and regains its force, the diuresis returns to normal, and the urea content of the blood drops to normal. Treatment should be addressed to the heart. On account of the oliguria, all the symptoms are deceptive, all the laboratory findings misleading. The first task is to get the heart pumping normally and to induce the liberating diuresis. Digitalis and theobromin are useful whether or not the kidneys are pathological, supplemented possibly by restricting the intake of salt. When the blood is pumped through the vessels with the normal force, there need be no restrictions as to intake of salt in these cases.—*Journal of the American Medical Association*, October 26, 1918.

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Sectional Secretary—G. E. NESBITT, M.D., F.R.C.P.I.

Friday, November 15, 1918.

Influenza.

THE PRESIDENT delivered his Inaugural Address on the above (see page 249).

CAPTAIN SPEARES also read a paper on the same subject (see page 253).

THE PRESIDENT OF THE ACADEMY conveyed the thanks of the Section to the authors of the papers, and introduced the discussion.

DR. POLLOCK stated that at the Richmond Hospital they had worked upon sputum, nasal discharge, empyema fluid, lung tissue, and heart's blood obtained *post-mortem*. Their conclusions might be summarised as follows: (1) From none of the above materials could they recover influenza bacilli; (2) in all cases either pneumococci or streptococci, or both, were recoverable, the green colour of the latter colonies being remarkable in some instances; (3) in two cases organisms were grown from heart's blood: in one pneumococci, in another streptococci; (4) as regards the type of pneumonia present, one fatal case showed *post-mortem* typical croupous pneumonia upon the right side, with characteristic broncho-pneumonia upon the left. Another showed a similar combination, together with acute tubercle at upper poles. The main type of pneumonia found was broncho-pneumonia, frequently coalescent; (5) one case showed bilateral empyema, but no pneumonia of any type.

PROFESSOR E. J. McWEENEY said that of the specimens of sputum which he had examined only a small minority contained the Pfeiffer bacillus. In his experience the prevailing organisms were pneumococci, strepto-pneumococci, and *Micrococcus catarrhalis*. In a few cases staphylococci were predominant. He had not been able to arrive at any conclusion as to the micro-organism responsible for the primary influenza, but considered the pneumonia to be due to secondary infection with the above-mentioned organisms. The pneumo-

cocci from severe cases had proved in his hands non-virulent to rabbits. Vaccines made from pure influenza strains and also from the complicating organisms with and without Pfeiffer's bacillus had gone forth from his laboratory in considerable quantities, but so far he had not been able to come to any well-grounded conclusions as to their protective or curative value.

DR. MOORHEAD, from the clinical point of view, called attention (1) to the occurrence of severe meningeal symptoms, particularly in children, and asked whether the influenzal bacillus had been found in the cerebro-spinal fluid in any cases. In his own experience he had done a spinal puncture on all such cases, and had found the fluid under great tension, but in each case the fluid proved sterile on examination; considerable improvement followed the puncture in almost every instance; (2) the frequency and severity of post-influenzal delirium and mania; and (3) the frequency of the development of a post-influenzal empyema. In his opinion, empyema could be easily overlooked owing to the fact that the physical signs present were often more those of consolidation rather than of exudation, and he strongly advocated exploratory puncture of the chest in all doubtful cases. As regards vaccines, he was not in a position to state a dogmatic opinion, but had a decided impression that as a prophylactic they were useful and tended greatly to mitigate the severity of a future attack, if such developed. He had also used them largely in treatment, but was still less prepared to express an opinion till he had tabulated his results. On the whole, he was unfavourable now to their employment in severe cases.

DR. CROFTON said he quite agreed with Captain Speares that the epidemic was due to the influenza bacillus. The facts that it appeared simultaneously with the epidemic all over the world, that the epidemic appeared to be largely controlled by inoculation with pure influenza vaccine, and that the illness often cut short with it, were very significant. He thought that the failure to isolate the microbe was generally due to unsuitable culture media, and described a medium—fresh human blood-agar—on which the microbe grew profuse colonies, grey in appearance, often attaining a diameter of two millimetres or more in forty-eight hours. The agar must be made strictly according to Eyre's directions. He did not agree that the true influenza bacillus ever became Gram-positive. He thought that the microbes producing the complications—viz.,

staphylococci, strepto-pneumococci, and Gram-negative cocci—might be a primary infection along with the influenza bacillus, but that more frequently the patient's own catarrh microbes became pathogenic when his resistance was lowered by the influenza bacillus. He referred to the frequency of delayed resolution after the pneumonia, and pointed out that it could be cleared up with the thiosinamine salicylate or thiosinamine-ethyl-iodide.

DR. DAY remarked that he found pneumonic vaccine injected early, before pneumonic symptoms were pronounced, of decided value, and also a streptococcus vaccine prepared by Dr. Pollock of much benefit, especially in cases where the expectoration was thin, copious, and purulent. He regretted that, like Dr. Craig, he had not been able to tabulate his results.

DR. O'KELLY stated that while engaged in making a vaccine for a case of influenza he had contracted the disease, and had been absent from hospital on that account when the disease was at its height in Dublin. He had had very encouraging reports on the value of a vaccine made with pneumococci and *Micrococcus catarrhalis*, not merely in treatment but also in prophylaxis, although no influenza bacilli were in it. The fact that such a vaccine, as well as a pure influenza vaccine, seemed to protect against the disease suggested possibly (as Nicolle is recorded as having stated) that a filter-passer was at fault, which might perhaps be present in the various vaccines used. He had so far not isolated Pfeiffer's bacillus in any case. Two blood cultures, one sterile, the other yielding pneumococci in pure cultivation, had been tested for an ultra-microscopic virus with a negative result. He thought it was perhaps too soon to pass judgment on the value of vaccine therapy, and trusted that at a later date the subject might be brought before the Section again, when more *data* would be available.

DR. NESBITT said that having himself developed influenza within twelve hours of vaccination with his first supply of influenza vaccine, his experience of its prophylactic use had been brief and unfortunate. He doubted, however, whether the vaccine had been to blame, and felt that it had played rather a neutral part. In judging the results of protective inoculation it was necessary to remember the curious variations in susceptibility—for example, in a school of 87 boys, 55 were affected, while in another institution, with a staff

of 45 young adults, only 8 contracted the disease. In the Richmond Hospital an outbreak occurred among the staff early in the epidemic, 35 persons being affected out of a total of 115. In these instances no special precautionary measures were taken. All his uncomplicated cases had recovered, and the 20 deaths to date in the Richmond Hospital were due to pulmonary complications, the mortality for cases with definite lung signs in this series being about 45 per cent. Many of the cases were admitted moribund, and in two a rapidly fatal tuberculosis appeared to have been lighted up by the preceding influenza. Autogenous vaccines, mainly of the pneumo-streptococcus type, had been largely used in treatment of the pulmonary cases, but he was inclined to agree with Dr. Moorhead that on looking back over the case-sheets their value was not convincing, though at the time they seemed to do good. He had also been much impressed with the liability to overlook empyema. The evidence that the outbreak was due to Pfeiffer's bacillus seemed very incomplete, and it was remarkable how frequently expert bacteriologists had failed to recover it from the cases. The fact that so many different vaccines were in use, each claiming equally successful results in the prevention of the disease, made one rather sceptical as to the efficiency of protective inoculation at present.

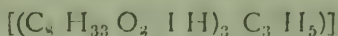
DR. F. KENNEDY CAHILL questioned as to how far " suggestion " acted in cases of " preventive " inoculation, and quoted a case of a patient who was injected with 1 c.c. of sterile water, and in the course of sixteen hours developed all the symptoms of influenza except a temperature. He remained in bed two days and resumed his work on the third day, feeling quite well. He had not since, nor had he had before, an influenzal attack. Another aspect of the present epidemic was the great severity of the clinical manifestations with the absence of post-influenzal profound prostration. In other epidemics the profoundness of the prostration was out of all proportion to the gravity of the disease. In this the severity of the disease was out of all proportion to the subsequent prostration, which was slight. Again, the onset of maniacal symptoms within twenty-four hours of the fall of temperature, as compared with the late depressive and melancholic signs in other epidemics, would point to some change in character of the infective microbe.

DR. BOXWELL said that from the beginning he had regarded

the more severe types as cases of profound septic intoxication. The typhus-like stupor, the hæmorrhagic tendency of the complications, the severe albuminuria and hæmaturia, and the post-febrile delirium, all pointed in that direction, and called for a serum, were such available, and not a vaccine. The evolution of the illness was too rapid to allow of satisfactory vaccine treatment, which took time. In the majority of cases patients were either obviously getting over it, or were far too ill to call for a second dose. Dr. Boxwell had given the vaccine a trial, vaccinating half the cases only, but could not satisfy himself that any effect was produced either for good or evil. As regards the prophylactic use of the vaccine, he thought we were on surer ground. He had no doubt that the influenza bacillus was the exciting cause of the epidemic, as he had seen an organism, resembling bacillus influenza, extremely difficult to grow, in nearly all the sputa examined. In general, prophylactic vaccination was scientifically sound, logical, and based on plenty of analogous precedent. But was the middle of a raging epidemic the time to advocate wholesale vaccination, even supposing we had any real evidence that it would be effective? It was impossible to say who were already infected, and who were free. In those already infected, vaccination was quite likely to precipitate an attack which they might otherwise have repelled. And there was not a particle of reliable evidence to show that the attack so precipitated was in any way mitigated by the preceding vaccination. Dr. Boxwell thought that the vaccination of contacts wholesale in a household was unwise. He had himself refused to vaccinate known contacts, and had vaccinated none without previous warning. The time for such vaccination was in the *intervals* of recurring epidemics, due care being taken to avoid possible sources of infection after the inoculation. Doses of reasonable size could then be used, at any rate without fear of doing harm. But as it was impossible to foretell when the disease was going to flare up again in epidemic form, and the immunity conferred was in most cases short-lived, the value of prophylaxis in influenza was largely discounted. In answer to a question put by Dr. Craig, Dr. Boxwell said he had seen one case in his own practice, and could vouch for two more, where rapidly fatal pneumonia had followed in from forty-eight to seventy-two hours after a prophylactic dose.

DRS. CRAIG, O'FARRELL, BEWLEY, PARSONS, ROWLETTE and MAJOR DAWSON also spoke.

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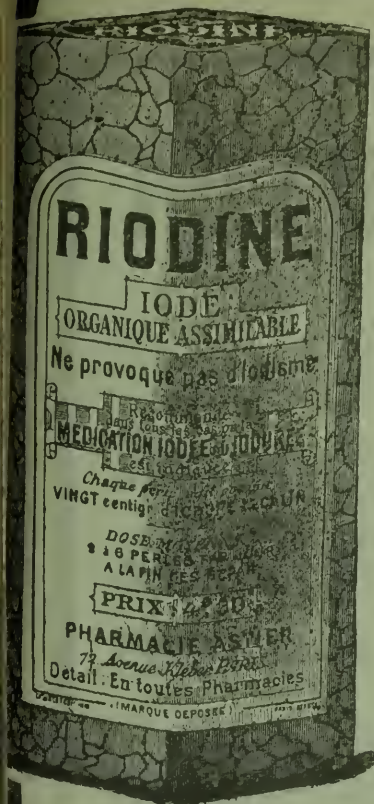
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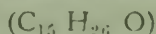
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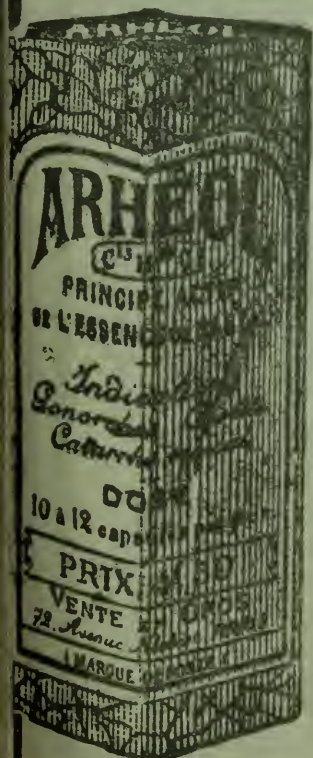
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The Lancet, Feb. 16th, 1918, pp. 243/50.

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SANITARY AND METEOROLOGICAL NOTES.

VITAL STATISTICS.

For four weeks ending Saturday, November 2, 1918.

IRELAND.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended Saturday, November 2, 1918, in the Dublin Registration Area and the eighteen principal provincial Urban Districts of Ireland was 34.9 per 1,000 of the aggregate population, which for the purposes of these returns is estimated at 1,127,268. The deaths from all causes registered in the week ended Saturday, November 2, and during the period of four weeks ended on that date, respectively, were equal to the following annual rates per 1,000 of the population:—Nineteen Town Districts, 34.9 and 25.4; Dublin Registration Area, 65.5 and 44.0; Dublin City, 72.3 and 45.5; Belfast, 17.5 and 14.1; Cork, 17.0 and 14.6; Londonderry, 40.4 and 24.4; Limerick, 17.6 and 16.3; and Waterford, 38.0 and 26.1.

The deaths from certain epidemic diseases—namely, enteric fever, typhus, small-pox, measles, scarlet fever, whooping-cough, diphtheria, dysentery, and diarrhoeal diseases—registered in the nineteen town districts during the week ended Saturday, November 2, 1918, were equal to an annual rate of 0.4 per 1,000. Among the 132 deaths from all causes in Belfast were 1 from enteric fever, 2 from scarlet fever, and 1 from diarrhoea and enteritis in a child under 2 years of age. One of the 31 deaths from all causes in Londonderry was from typhus. Whooping-cough caused 1 of the 2 deaths recorded in Portadown.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock and Kingstown. The population of the area is 399,000.

In the Dublin Registration Area the births registered during the week ended November 2, 1918, amounted to 126—58 boys and 68 girls, and the deaths to 562—265 males and 297 females.

DEATHS.

The deaths registered, omitting the deaths (numbering 61) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 65.5 per 1,000 of the population. The rate for all deaths registered during the forty-four weeks of 1918 ended November 2 was 24.3, while in the corresponding period of the preceding ten years, 1908–1917, it had been 22.0.

The 501 deaths appertaining to the Area included 2 from whooping-cough, and 1 from diarrhoea and enteritis of a child under 2 years. As many as 250 deaths from influenza were registered—a number which is equivalent to an annual rate of 32.7 per 1,000 of the population. Of these deaths 210 belonged to the City, affording a rate of 35.9 per 1,000 of the population, and including 124 (or 39.9 per 1,000) assigned to North City Districts and 86 (or 31.3 per 1,000) to South City Districts. Forty deaths from influenza (or 22.2 per 1,000 of the population) were referred to the Urban Districts of Rathmines, Pembroke, Blackrock and Kingstown. In the three preceding weeks deaths from influenza in the Registration Area numbered 29, 101, and 162 respectively.

Deaths attributed to pneumonia were 89 (comprising 25 from broncho-pneumonia, 13 from lobar pneumonia, and 51 from pneumonia, type not distinguished), as against 25, 58, and 69 in the three weeks preceding.

Tuberculosis caused 26 deaths as against 22, 16, and 23, respectively, in the three weeks preceding. Of the 26 deaths ascribed to tuberculosis, 18 were referred to pulmonary tuberculosis, 4 to abdominal tuberculosis, and 4 to other forms of tuberculosis.

Fifteen deaths were caused by cancer, 13 by organic diseases of the heart, and 31 by bronchitis.

Among the deaths of infants under one year old, 4 were ascribed to convulsions, 6 to influenza, 8 to pneumonia, 7 to premature birth, and 9 to congenital debility.

Ninety-nine of the deaths registered during the week appertaining to the Area were of children under 5 years of age, 40 being of infants under one year, of whom 11 were under one month old. Fifty-eight deaths of persons aged 65 and upwards were registered, including 43 deaths of persons of 70 years or upwards.

Of the 501 recorded deaths 134 occurred in hospitals and other public institutions.

Three deaths of residents in the Dublin Registration Area were caused by violence, including 1 by burns and 1 by drowning.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

The cases admitted to hospital during the week ended November 2, and the cases under treatment at its close, respectively, were as follow :—Enteric fever, 2 and 13 ; measles, 2 and 2 ; scarlet fever, 12 and 59 (exclusive of 18 convalescents at Beneavin, Glasnevin, the Convalescent Home of Cork Street Hospital) ; and diphtheria, 2 and 11. One hundred and twenty-four cases of pneumonia were admitted during the week, and 218 remained under treatment at its close. Of the deaths in hospital recorded during the week, 30 were from pneumonia.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, November 2, in 96 large English towns (including London, in which the rate was 55.5) was equal to an average annual death-rate of 43.0 per 1,000 persons living. The average rate for 16 principal towns of Scotland was 30.5 per 1,000, the rate for Glasgow being 26.7, and that for Edinburgh 35.4.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of October, 1918.

Mean Height of Barometer, -	-	-	29.936 inches.
Maximal Height of Barometer (20th, at 9 p.m.),	30.400	„	„
Minimal Height of Barometer (7th, at 9 a.m.),	29.406	„	„
Mean Dry-bulb Temperature, -	-	-	48.2°.

Mean Elastic Force (Tension) of Aqueous Vapour,	0.290 inch.
Mean Humidity,	- - - 87.0 per cent.
Highest Temperature in Shade (on 9th),	- 62.9°.
Lowest Temperature in Shade (on 24th),	- 34.1°.
Lowest Temperature on Grass (Radiation)	
(13th and 24th),	- - - 30.9°.
Mean Amount of Cloud,	- - - 66.3 per cent.
Rainfall (on 21 days),	- - - 2.356 inches.
Greatest Daily Rainfall (on 3rd),	- - 0.408 inch.
General Directions of Wind,	- - - W., S.W.
Mean Wet-bulb Temperature,	- - 46.3°.
Mean Dew-point Temperature,	- - 44.3°.

Remarks.

The cold weather, which was so marked a feature of September, continued with only slight intermissions until Sunday, the 27th, when a milder period set in lasting to the end of the month, and accompanied by quiet fine weather until the 30th, when the weather broke with freshening S.W. winds.

The month opened with a fine day, which was followed by an unsettled rainy spell and squally S.W. winds, which attained the force of a gale (8) on the 5th and 7th. On the 9th the thermometer rose to 62.9°, the highest reading of the month, but temperature soon gave way, and the weather of the following week—13th to 19th—was markedly autumnal, with frequent but not heavy rainfall. In the week ended the 26th, there was very little air-movement, and atmospheric pressure was high—the mean for the week being 30.120 inches. Radiation by night was sometimes brisk, the thermometer even in the screen falling to 35.0° on the 23rd and to 34.1° on the 24th.

The penultimate days of the month were chiefly fine and mild ; but a broken period was ushered in by a brisk fall of the barometer on the 30th.

The mean height of the barometer was 29.936 inches, or 0.096 inch above the corrected average value for October—namely, 29.840 inches. The mercury rose to 30.400 inches at 9 p.m. of the 20th, and fell to 29.406 inches at 9 a.m. of the 7th. The observed range of atmospheric pressure was, therefore, 0.994 inch.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 48.2° , or 3.0° below the value for September, 1918. The arithmetical mean of the maximal and minimal readings was 49.3° , compared with a thirty-five years' (1871–1905) average of 49.5° . Using the formula, $\text{Mean Temp.} = \text{Min.} + (\text{Max.} - \text{Min.}) \times .485$, the mean temperature was 49.2° , or 0.1° below the average mean temperature for October, calculated in the same way, in thirty-five years, 1871–1905, inclusive (49.3°). On the 9th the thermometer in the screen rose to 62.9° —wind, S.W.; on the 24th the temperature fell to 34.1° —wind, W. The minimum on the grass was 31.9° on the 13th and 24th.

In Dublin the mean maximal temperature was 54.5° , compared with the average (54.7°); and the mean minimal temperature was 44.1° , compared with the average, 44.3° . The arithmetical mean temperature (49.3°) was 0.2° below the average (49.5°); the mean dry-bulb readings at 9 a.m. and 9 p.m. were 48.2° . In the fifty years ending with 1915, October was coldest in 1892 (M. T. = 44.8°) and in 1896 (M. T. = 45.0°). It was warmest in 1908 (M. T. = 55.4°) and in 1912 (M. T. = 54.9°).

The rainfall was 2.356 inches, distributed over 21 days. The rainfall was under, but the rain-days were above, the average. The average rainfall for October in the 35 years, 1871–1905 inclusive, was 2.870 inches, and the average number of rain-days was 18. In 1880 the rainfall in October was very large—7.358 inches on 15 days. In 1875, also, 7.049 inches fell on 26 days, and in 1916, 5.951 inches fell on 24 days. On the other hand, in 1904, only 0.454 inch fell on 11 days, in 1890 only 0.639 inch fell on but 11 days, in 1884 only 0.834 inch fell on but 14 days, and 1868 only 0.856 inch on 15 days.

High winds (force 4 to 7) were noted on 11 days, and on 3 days (5th, 6th and 7th) the wind attained the force of a gale (force 8 or upwards). The atmosphere was foggy in Dublin on the 19th and 20th. There was a solar halo on the 24th, rainbows on the 30th, and a lunar glory was seen at 9 45 p.m. of the 19th. Lunar halos appeared on the 14th and 15th. Hail fell on the 7th.

At the Normal Climatological Station in Trinity College,

Dublin, the observer, Mr. C. M. Connolly, B.A., returns the mean atmospheric pressure as 29.939 inches ; lowest, 29.450 inches at 9 a.m. of 7th : highest, 30.394 inches, 9 p.m. of 20th. The arithmetical mean temperature was 49.7°, the mean dry-bulb reading at 9 a.m. and 9 p.m. being 49.9°. Rainfall, 2.15 inches on 20 days, greatest fall in 24 hours, 0.408 inch on 31st. The number of hours of bright sunshine was 69.5 : daily average, 2.3 hours. On the 4th there were 9.0 hours, and on the 12th and 16th, 6.8 hours. At 9 a.m. the mean earth-temperature was 50.4° at a depth of one foot and 52.4° at 4 feet. The lowest temperature on the grass (terrestrial radiation) was 27° on 23rd. The highest temperature in the shade was 64° on 9th ; the lowest was 34° on 24th.

The Editor expresses his acknowledgment to the following observers for information as to rainfall and other weather data :—Captain Edward Taylor D.L., Ardgillan, Balbriggan, Co. Dublin ; Mr. T. Bateman, Malahide, Co. Dublin ; Mr. J. Pilkington, Stirling, Clonee, Co. Meath ; Miss Mary Love, Cheeverstown, Clondalkin, Co. Dublin ; The Commandant, Ordnance Survey Office, Phoenix Park, Dublin ; Mr. F. Dudley Joynt, Donnybrook, Dublin ; Mr. Harold Fayle, Sandford Lodge, Ranelagh, Dublin ; Dr. Arthur S. Goff, Dundrum, Co. Dublin ; Mr. W. J. M'Cabe (for the Right Hon. L. A. Waldron, D.L.), Killiney, Co. Dublin ; Miss Armstrong, Rathdown House, Greystones, Co. Wicklow ; Mrs. Sydney O'Sullivan, Auburn, Greystones ; Dr. F. O'B. Kennedy, Royal National Hospital, Newcastle, Co. Wicklow ; Mr. H. V. Macnamara, D.L., Ennistymon, Co. Clare ; Mrs. E. Davis, Castleconnell, Co. Limerick ; and the Rev. Canon Arthur Wilson, Dunmanway, Co. Cork.

ARDGILLAN.—Rainfall, 2.77 inches, on 22 days. Average, 2.95 inches on 17 days. Maximum in 24 hours, 0.47 inch on 3rd. Rainfall since January 1, 25.55 inches on 159 days. Average, 23.95 inches on 155 days. Max. temperature in shade, 61.1° on 9th ; min. 33.8° on 13th.

MALAHIDE.—Rainfall, 2.385 inches, on 21 days. Average, 3.07 inches. Maximum, 0.38 inch, on 31st. Rainfall since January 1st, 20.505 inches, on 145 days.

CLONEE.—Rainfall, 3.24 inches, on 23 days. Maximum,

0.66 inch on 3rd. Rainfall since January 1st, 27.31 inches, on 167 days.

PHŒNIX PARK.—No return.

CHEEVERSTOWN.—Rainfall, 2.72 inches, on 24 days. Maximum, 0.48 inch, on 3rd.

DONNYBROOK.—Rainfall, 1.755 inches, on 19 days. Maximum, 0.460 inch on 31st.

RANELAGH.—

Mean corrected Height of Barometer	-	No return
Highest corrected Reading,	-	-
Lowest corrected Reading	-	-
Mean Dry-bulb Temperature,	-	48.9°.
Mean Wet-bulb Temperature,	-	47.2°.
Mean Vapour Pressure,	-	.307 inch.
Mean Humidity,	-	89 per cent.
Mean Maximal Temperature,	-	55.9°.
Mean Minimal Temperature,	-	43.4°.
Arithmetical Mean Temperature,	-	49.7°.
Highest Temperature in Screen (10th),	-	64.0°.
Lowest Temperature in Screen (13th),	-	31.0°.
Lowest Temperature on Grass (13th),	-	24.0°.
Nights of Ground Frost,	-	7.
Rainfall on 19 days,	-	2.12 inches.
Greatest Daily Rainfall (31st),	-	0.41 inch.
Mean Amount of Cloud,	-	74 per cent.
Days of Clear Sky,	-	1.
Days of Overcast Sky,	-	17.
General Direction of Wind,	-	S.W. to W.

Remarks.—Mostly mild, overcast, and windy.

DUNDRUM.—Rainfall, 2.71 inches, on 26 days. Maximum 0.63 inch on 31st. Mean shade temperature, 48.7°; maximum, 62° on 9th and 23rd; minimum, 29° on 13th.

KILLINEY.—Rainfall, 2.32 inches, on 15 days. Maximum, 0.64 inch on 31st. Average (24 years), 2.985 inches on 17 days.

GREYSTONES (Rathdown House).—Rainfall, 3.22 inches on 19 days. Maximum, 0.85 inch on 31st.

GREYSTONES (Auburn).—Rainfall, 2.74 inches on 17 days. Maximum, 0.75 inch on 31st.

NEWCASTLE.—Rainfall, 3.42 inches on 21 days. Maximum, 0.76 inch on 31st. Mean temperature, 48.2°; maximum 61° on 7th; minimum, 35° on 13th; mean maximum, 54.1°; mean minimum, 42.3°.

ENNISTYMON.—Rainfall, 6.96 inches on 22 days. Maximum, 1.44 inches on 2nd.

CASTLECONNELL.—Rainfall, 5.75 inches on 22 days. Maximum, 1.11 inches on 8th.

DUNMANWAY.—Rainfall, 7.20 inches on 21 days. Maximum, 1.37 inches on 5th. The observer writes:—5.03 inches fell on the first 8 days. No rain from 19th to 24th inclusive. Very stormy and heavy rain on afternoon and night of 5th. Thunder and lightning on night of 6th. Frosts on nights of 10th, 11th, 12th, 22nd, 23rd, 24th, and 31st.

HEATED AIR IN THE TREATMENT OF WAR WOUNDS.

DRS. BELOT and DECHAMBRE reported to the Société médico-chirurgicale de la XIII-e Région the good results which they have obtained from the treatment of war wounds with a jet of hot air. The temperature of the air varied between 60° and 80° C., with a pressure of 4 or 5 kilograms. It is well to combine this treatment with massage of the surrounding and subjacent tissues. The heated air dries the wound, the odour disappears, and dead tissue is thrown off. The surface becomes rosy in hue, small granulations form, and epidermisation takes place, extending from the periphery toward the centre. The duration of the treatment varies from one to three months. About 600 cases which have resisted the usual methods of treatment have been treated by Belot and Dechambre, in the manner described, with only 5 or 6 per cent. of failures, generally restricted to cases associated with severe trophic lesions.—*Journal of the American Medical Association*, October 26, 1918.

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